

(12) UK Patent Application (19) GB (11) 2 326 453 (13) A

(43) Date of A Publication 23.12.1998

(21) Application No 9712437.4

(22) Date of Filing 17.06.1997

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(51) INT CL⁶

F16L 21/00 47/00

(52) UK CL (Edition P)

F2G G1 G1A G1E G10A G28

(56) Documents Cited

GB 2288860 A	GB 2288214 A	GB 2215002 A
GB 0721656 A	GB 0606658 A	GB 0484163 A
GB 0446463 A	EP 0645161 A2	US 5143408 A
US 4875719 A	US 4722556 A	US 4597594 A

(58) Field of Search

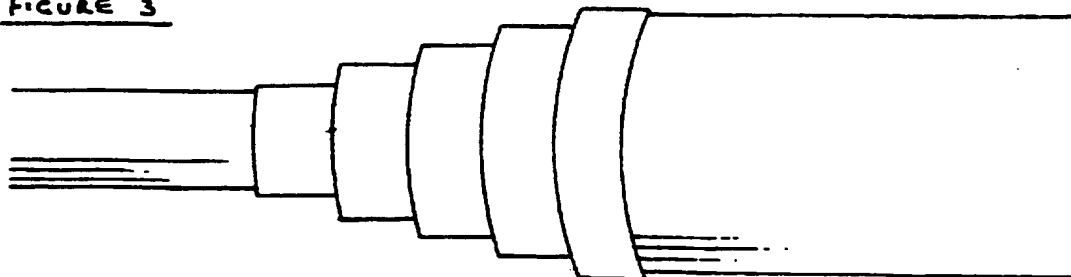
UK CL (Edition O) F2G G1 G10A G10B G21D G24A1
G24A2 G24B G24Z G4F G4Z
INT CL⁶ F16L 19/02 19/04 19/06 21/00 21/02 25/00
31/00 31/02 33/00 37/02 41/02 41/03 47/00

(54) Abstract Title

Universal tube connector

(57) The connector is a funnel-shaped tube of incremental steps that can be easily cut as required at one end (or both) - to enable two different size diameter tubes/pipes (whether metric or imperial) to be connected quickly together, outside or inside the connector ends. The connector can be flexible, to connect two angled tubes and may have a branch connection.

FIGURE 3



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FIGURE 1

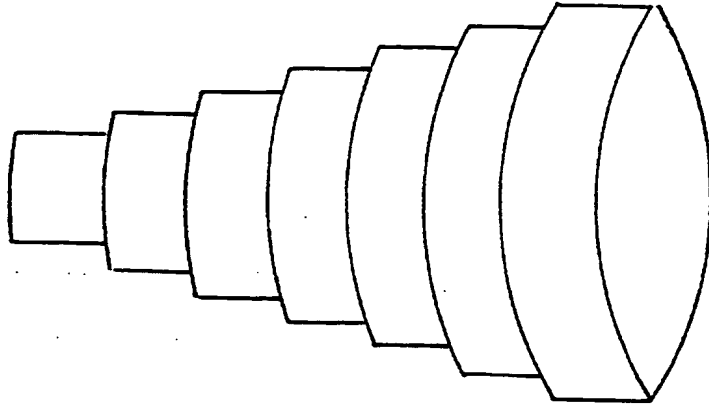


FIGURE 2

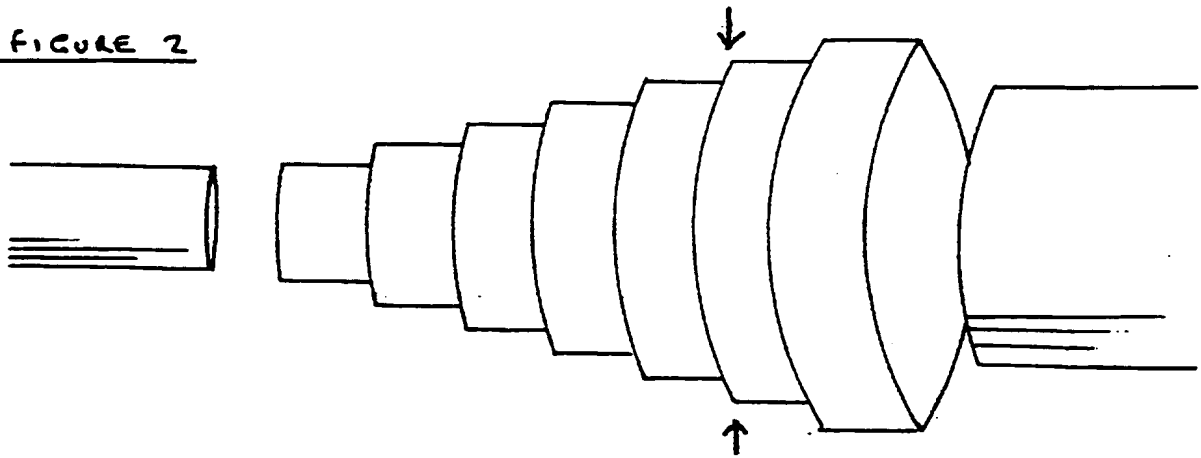


FIGURE 3

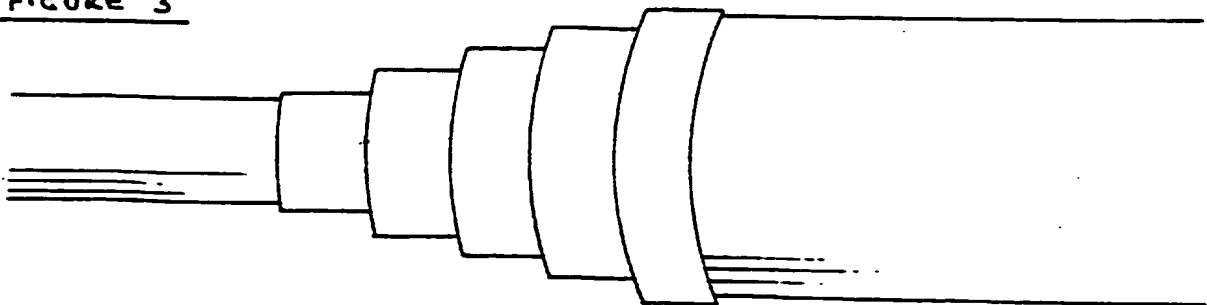


FIGURE 4

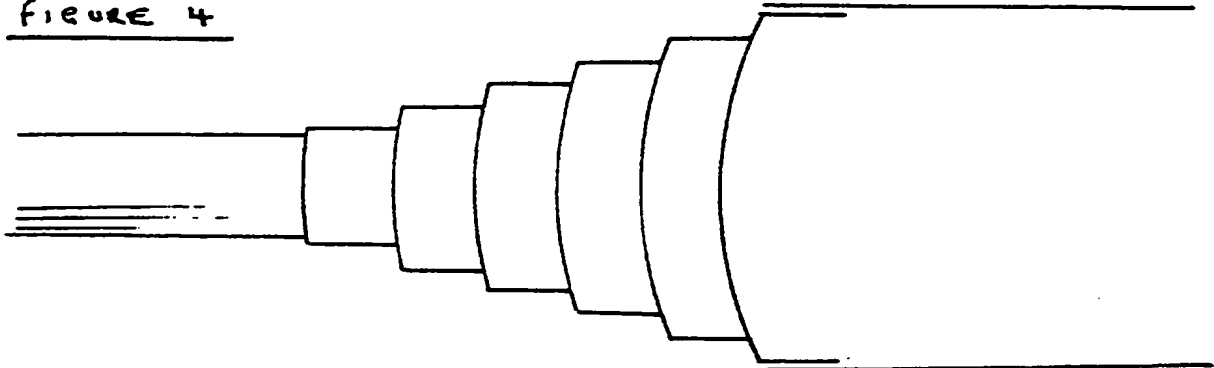


FIGURE 5

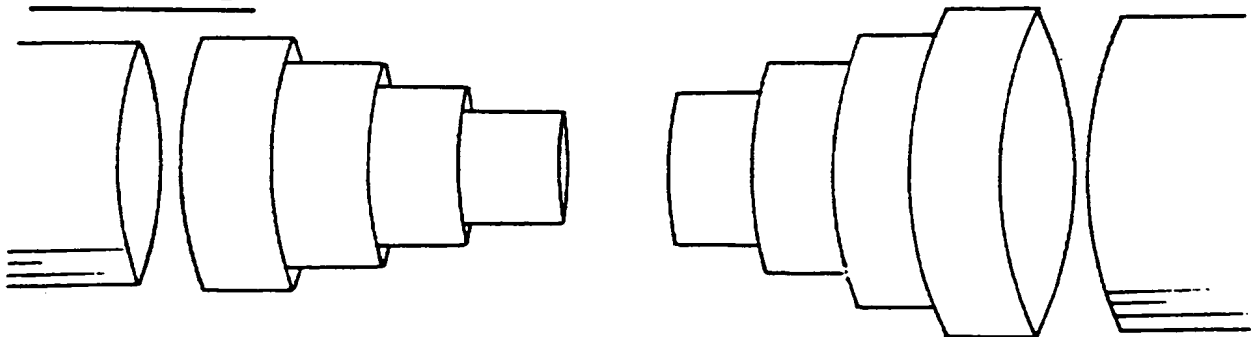


FIGURE 6

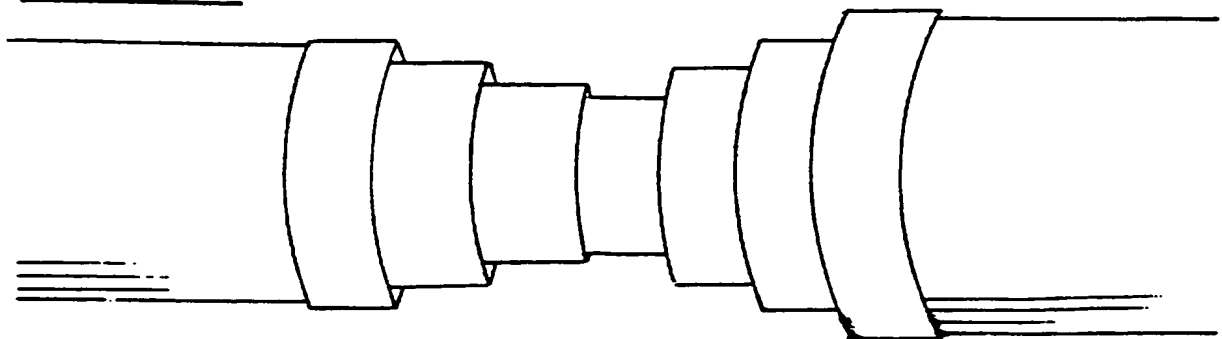
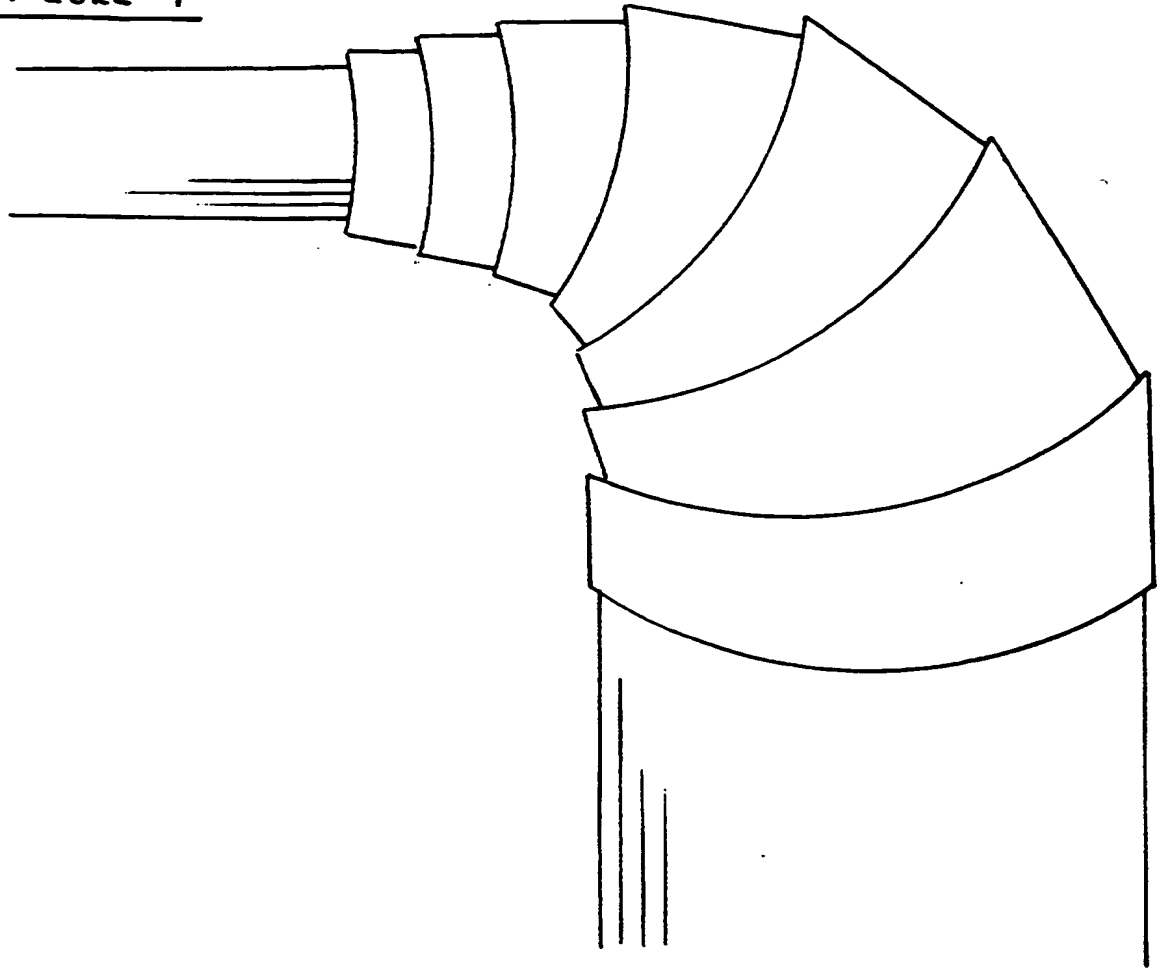


FIGURE 7

2326453**JAMHEL UNIVERSAL TUBE**

This invention relates to a universal tube/pipe coupling.

This universal tube is required to fix two tubes/pipes together and this invention allows the connection between varying diameters/sizes - either along the same plane or varying angles if using a flexible material - to be made easily and quickly .

The universal tube looks like a funnel except that it is stepped in varying level increments (there can be just a few or many) that can be cut off at either end in order to fix two tubes/pipes together .

Besides the tubes/pipes being able to be connected together on the inside of the Jamhel Universal Tube - a tube/pipe could also be connected to it on the outside circumference to give yet another size and more versatility .

This universal tube could be relatively inexpensive to produce if made from a plastic type material (or flexible material to be bent around bends). It could also be produced from metal - for example copper that could be soldered as required .

According to the present invention this universal tube that looks like a funnel with level incremental steps that can be cut-off at any point at either end can connect two tubes/pipes to each other quickly and easily .

The invention can have varying start and end diameters (which can be cut-off at either towards one end or both ends if required) to the correct fitting for the tubes/pipes that are to be connected together to be inserted .

The universal tube could also be metric at one end and imperial at the other if required .

The tubes/pipes to be connected could also either fit inside or outside of the universal tube so as to provide even greater versatility .

The universal tube could also be flexible (depending upon the material used) to enable two tubes/pipes of varying diameters and at varying angles to be connected to each other . If necessary two of these universal tubes could be joined together to give additional variation and these could also have different starting and ending diameters as well .

There could also be another spur off the side of the invention to connect even a third tube.

The most important fact about this universal tube is that it can be manufactured to any size , from any material , be either imperial or metric sizes and can be very easily and quickly cut to the correct size .

JAMHEL UNIVERSAL TUBE

A specific embodiment of the invention will now be described by way of example with reference to the accompanying drawing in which :-

- Figure 1 shows the Jamhel Universal Tube with the level stepped increments which can be cut-off at any size to enable quick coupling of two varying diameter tubes/pipes to each other .
- Figure 2 shows the Jamhel Universal Tube with the two tubes/pipes with varying diameters which are to be connected .
- Figure 3 shows the Jamhel Universal Tube with part of each end cut off - to enable the tubes/pipes of different diameters to be easily connected together .
- Figure 4 shows the Jamhel Universal Tube with the two tubes/pipes connected to it - with one of them inserted into it and the other placed over the circumference .
- Figure 5 shows two Jamhel Universal Tubes of varying incremental starting and ending sizes.
- Figure 6 shows two Jamhel Universal Tubes of varying sizes cut-off and joined at one end to show even greater flexibility .
- Figure 7 shows a flexible Jamhel Universal Tube bent around an acute angle .

JAMHEL UNIVERSAL TUBE

Referring to the Jamhel Universal Tube the invention which looks like a funnel with incremental steps can be made from any chosen material that is required .

It would normally be manufactured from either a plastic type or flexible material - or alternatively from a metal such as copper .

The tubes or pipes that are to be connected to each other are simply pushed inside (or outside) of the universal tube and it is cut to the required size .

The interesting point of the invention is that it extremely simple to use and could easily be of interest to do-it-yourself people as well as the professional tradesmen.

CLAIMS

JAMHEL UNIVERSAL TUBE

- 1) A Jamhel Universal Tube is a quick-fit solution for connecting tubes/pipes of varying diameters together easily .
- 2) A Jamhel Universal Tube as described in Claim 1 can be made from plastic or flexible material or from a metal which could be copper if required .
- 3) A Jamhel Universal Tube as claimed in Claims 1 and 2 can have starting and ending diameters of any predetermined size and varying level increments of any quantity which can easily and quickly be cut to size as required.
- 4) A Jamhel Universal Tube as claimed in Claims 1,2 and 3 could have varying diameters at either end which could not only be for example both metric or imperial - but with part of the increments in metric at one end and part of the other end imperial .
- 5) A Jamhel Universal Tube as claimed in Claims 1,2,3 and 4 could also be flexible so that it can connect different diameter tubes/pipes at any angle - for example a right-angle .
- 6) There could also be another outlet tube manufactured onto the Jamhel Universal Tube to enable a third tube/pipe to also be connected to it .
- 7) A Jamhel Universal Tube as claimed in Claims 1,2,3,4,5 and 6 could also connect a tube internally at one end (after being cut to size if required) and also connect another tube over the outer circumference at the other end .
- 8) A Jamhel Universal Tube substantially as described herein with reference to Figures 1 - 7 of the accompanying drawing .



Application No: GB 9712437.4
Claims searched: 1-8

Examiner: Roger Binding
Date of search: 27 August 1997

Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.O): F2G (G1, G4F, G4Z, G10A, G10B, G21D, G24A1, G24A2, G24B, G24Z)

Int Cl (Ed.6): F16L 19/02, 19/04, 19/06, 21/00, 21/02, 25/00, 31/00, 31/02, 33/00, 37/02, 41/02, 41/03, 47/00

Other:

Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
X	GB 2288860 A (ADAMS)	1-4, 7
X	GB 2288214 A (BERNAARD)	1-7
X	GB 2215002 A (BURCHER)	1, 3, 7
X	GB 0721656 A (GREEN)	1-4, 7
X	GB 0606658 A (BROWN-BOVERI)	1-4, 6, 7
X	GB 0484163 A (DONALD)	1-4
X	GB 0446463 A (WHEATON)	1-4
X	EP 0645161 A2 (STERIMED)	1-4
X	US 5143408 A (HOLTSMARK)	1-4, 7
X	US 4875719 A (MYLETT)	1-4, 7
X	US 4722556 A (TODD), see Fig 3.	1-3, 7
X	US 4597594 A (KACALIEFF)	1-4, 7

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.



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